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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/604,450
Filing Date: July 22, 2003
Appellant(s): TING ET AL.

Ramraj Soundararajan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/01/2008 appealing from the Office action mailed 12/31/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

WITHDRAWN REJECTIONS: The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

Claims 1-7, 9-17 and 19-20 stand rejected under 35 USC 102(e) as being anticipated by Ferrari et al. (U.S. 2003/0097357A1).

Claims 8 and 18 stand rejected under 35 USC 103(a) as being unpatentable over Ferrari et al. as applied to claims 1-7, 9-17 and 19-20 above, and further in view of Tip et al. (U.S. 2003/0018603A1).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6491521	Lin et al.	09-2005
US 2004/0168119 A1	Liu et al.	08-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. ('Lin' herein after) (US 6,941,521 B2) further in view of Liu et al. ('Liu' herein after) (US 2004/0168119 A1).

With respect to claim 1,

Lin discloses a system to order a plurality of nodes associated with entities in a document, said system comprising: a node generator parsing said entities in said document and creating a plurality of nodes that represent said entities and relationships that exists among said entities (Figure 1, column 3 lines 63 – 67 and column 4 lines 20 – 42, Lin); a node grouper grouping said created plurality of nodes into a plurality of regions, each of said regions defining an area within a n-dimensional space, wherein n is greater than one (Figure 4, column 5 lines 19 – 40, Lin); and a formatter for formatting said plurality of regions for storage (column 14 lines 12 – 24, Lin).

Lin, however does not disclose the formatter for formatting explicitly as claimed.

Liu teaches the formatter for formatting as claimed (paragraphs 52 – 53 and 57, Liu).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are in the field of document processing and finding relationships amongst nodes (paragraph 11, Liu). Furthermore, the formatting of Liu invention would allow the document to be rendered through the web browser (paragraph 57, Liu).

3. Claims 2 – 10 are rejected under the same rationale given for claim 1. The citations of the elements claimed and taught are listed below.

With respect to claim 2,

Lin as modified discloses a system as per claim 1, wherein said regions are node descendant regions (Figure 2A and column 4 lines 5 – 32, Lin).

With respect to claim 3,

Lin as modified discloses a system as per claim 1, wherein said formatted regions are stored in one or more pages (column 14 lines 12 – 24, Lin).

With respect to claim 4,

Lin as modified discloses a system as per claim 1, wherein said set of regions are grouped by said node grouper based upon anticipated access pattern and usage (Figure 4, column 5 lines 19 – 40, Lin).

With respect to claim 5,

Lin as modified discloses a system as per claim 1, wherein said node grouper additionally monitors insertion or deletion of nodes in each of said regions, whereby modifications to nodes within a particular region affects only said nodes in said particular region, said modifications causing nesting levels to be created based of a parent level region (column 7 lines 15 – 39, Lin).

With respect to claim 6,

Lin as modified discloses a system as per claim 1, wherein said document is a mark-up language based document (column 3 lines 41 – 53, Lin).

With respect to claim 7,

Lin as modified discloses a system as per claim 6, wherein said mark-up language based document is an XML document (column 3 lines 41 – 53, Lin).

With respect to claim 8,

Lin as modified discloses a system as per claim 1, wherein said system associates post order traversal numbers with said plurality of nodes, said post order traversal numbers identifying containment relationships among nodes (paragraph 74, Liu).

With respect to claim 9,

Lin as modified discloses a system as per claim 1, wherein said system is implemented across networks (Figure 8, Lin).

With respect to claim 10,

Lin as modified discloses a system as per claim 9, wherein said network is any of the following: local area network, wide area network, or the Internet (Figure 8 and column 14 lines 8 – 12, Lin).

With respect to claim 11,

Lin discloses a method for ordering a plurality of nodes associated with entities in a document, said method comprising: parsing said entities in said document and creating a plurality of nodes that represent said entities and relationships that exists among said entities (Figure 1, column 3 lines 63 – 67 and column 4 lines 20 – 42, Lin); grouping said created plurality of nodes into a plurality of regions, each of said regions defining an area within a n-dimensional space, wherein n is greater than one (Figure 4, column 5 lines 19 – 40, Lin); and formatting said plurality of regions for storage (column 14 lines 12 – 24, Lin).

Lin, however does not disclose the formatter for formatting explicitly as claimed.

Liu teaches the formatter for formatting as claimed (paragraphs 52 – 53 and 57, Liu).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are in the field of document processing and finding relationships amongst nodes (paragraph 11, Liu). Furthermore, the formatting of Liu invention would allow the document to be rendered through the web browser (paragraph 57, Liu).

4. Claims 12 – 20 are rejected under the same rationale given for claim 11. The citations of the elements claimed and taught are listed below.

With respect to claim 12,

Lin as modified discloses a method as per claim 11, wherein said regions are node descendant regions (Figure 2A and column 4 lines 5 – 32, Lin).

With respect to claim 13,

Lin as modified discloses a method as per claim 11, wherein said formatted regions are stored in one or more pages (column 14 lines 12 – 24, Lin).

With respect to claim 14,

Lin as modified discloses a method as per claim 11, wherein said set of regions are grouped based upon anticipated access pattern and usage (Figure 4, column 5 lines 19 – 40, Lin).

With respect to claim 15,

Lin as modified discloses a method as per claim 11, wherein said method comprises the additional step of monitoring the insertion or deletion of nodes in each of said regions, whereby modifications to nodes within a particular region affects only said nodes in said particular region, said modifications causing nesting levels to be created based of a parent level region (column 7 lines 15 – 39, Lin).

With respect to claim 16,

Lin as modified discloses a method as per claim 11, wherein said document is a mark-up language based document (column 3 lines 41 – 53, Lin).

With respect to claim 17,

Lin as modified discloses a method as per claim 16, wherein said mark-up language based document is an XML document (column 3 lines 41 – 53, Lin).

With respect to claim 18,

Lin as modified discloses a method as per claim 11, wherein said system associates post order traversal numbers with said plurality of nodes, said post order traversal numbers identifying containment relationships among nodes (paragraph 74, Liu).

With respect to claim 19,

Lin as modified discloses a method as per claim 11, wherein said method is implemented across networks (Figure 8, Lin).

With respect to claim 20,

Lin as modified discloses a method as per claim 19, wherein said network is any of the following: local area network, wide area network, or the Internet (Figure 8 and column 14 lines 8 – 12, Lin).

Response to Arguments

5. Claims 1 – 20 are pending in this Office Action. After a further search and a thorough examination of the present application, claims 1 – 20 remain rejected.

6. Applicant's arguments filed with respect to claims 1 – 20 have been fully considered but they are not persuasive.

First, Applicant argues that there is no teaching in Lin or Liu alone or in combination parsing said entities in said document and creating a plurality of nodes that represent said entities and relationships that exists among said entities.

In response to Applicant's argument, the Examiner submits Lin teaches the parsing of entities in document and creates nodes that represent the entities and their relationships in Figure 1, column 3 lines 63 – 67 and column 4 lines 1 – 4 and 20 – 42. It

is clearly disclosed how the parser parses the document and converts it into a DOM which is a document object model formed out of the respective document.

Second, *Applicant argues that there is no teaching in Lin or Liu alone or in combination of grouping the created plurality of nodes into a plurality of regions, wherein each of the regions define an area within an n-dimensional space, wherein n is greater than one.*

In response to Applicant's argument, the Examiner submits that Lin discloses the grouping being defined and processed in an n-dimensional space in Figure 4, column 5 lines 19 – 40.

Third, *Applicant argues that there is no teaching in Lin or Liu alone or in combination of a formatter for formatting said plurality of regions for storage.*

In response to Applicant's argument, the Examiner submits that Lin in combination with Liu teaches a formatter for formatting said plurality of regions for storage in paragraphs 52 – 53 and 57, Liu.

Claim 11 recites the same subject matter and for the same reasons as cited above the rejection is maintained. Claims 2 – 10 and 12 – 20 depend on claims 1 and 11 respectively and the rejection is sustained on all the above-mentioned claims.

(10) Response to Argument

Appellant argues that Lin and Liu alone or in combination do not teach a node generator, a node grouper and a formatter.

Examiner respectfully disagrees as Lin and Liu in combination teach all three components argues above, a node generator, a node grouper and a formatter. As cited earlier by examiner in previous office action Lin teaches a node generator in column 3 lines 63 - 67 followed through in column 4 lines 20 – 42. In the cited columns and lines Lin clearly teaches the generation of a data structure which is a tree data structure called the Document Object Model (DOM) tree. Furthermore, also in the cited lines is disclosed how the node generation takes place for this data structure after having parsed the information.

Furthermore, a node grouper is taught in combination by Lin and Liu in column 5 lines 16 – 40 and column 6 lines 33 - 42. In these cited columns and lines Lin teaches two types of node groups, one which is grouped with a relationship like a parent and child and another that is the Physical address group object. Both these groupings cover the broad interpretation allowed to cover the n-dimensional grouper that is being claimed by the appellant. Furthermore, the DOM is a multi-dimensional structure/space. Also the formatter is disclosed in Lin and Liu in paragraphs 52 – 53 and 57, where Liu teaches a report formatter and also discloses the different storage formats of these reports.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Navneet K. Ahluwalia/

Examiner, Art Unit 2166

Conferees:

/Hosain T Alam/

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